

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A method for purifying teicoplanin A₂ comprising:

(i) ~~a primary pre-purification step of~~ purifying a filtrate of a fermentation broth comprising teicoplanin A₂ on -of-a- strain using a synthetic adsorbent, to obtain a primary pre-purification solution;

(ii) ~~a secondary pre-purification step of~~ purifying the primary pre-purification solution using on a cation exchange resin having a high cross-linkage, a catalytic resin, or a chelate resin, to create a secondary pre-purification solution;

(iii) ~~a final purification step of~~ purifying the secondary pre-purification solution using on a reverse phased reversed phase resin, to create a purified teicoplanin A₂ solution; and

(iv) drying the purified teicoplanin A₂ solution to form a powder-forming step.

2. (Currently Amended) The method according to claim 1, wherein the synthetic adsorbent is at least one selected from the group consisting of chosen from high porous styrene type synthetic adsorbents, high porous styrene type synthetic adsorbents having bromine chemically substituted, high porous styrene/divinyl polymers, macroreticularly cross-linked polymer, macroreticularly cross-linked aliphatic polymer, macroreticularly cross-linked aromatic polymer, methacrylic synthetic adsorbents and carbonaceous synthetic adsorbents

comprising a high porosity styrene/divinyl benzene ion exchange resin.

3. (Currently Amended) The method according to claim 2, wherein the synthetic adsorbent is at least one selected from the group consisting of chosen from DIAION-SP207, DIAION SP700, DIAION SP825, DIAION SP850, DIAION HP2MG, AMBERLITE XAD 4, AMBERLITE XAD 7, AMBERLITE XAD 1600T, AMBERSORB 563, AMBERSORB 572, AMBERSORB 600, Lewatit VP OC 1064, Lewatit VP OC 1066 and Lewatit EP 63 high porous styrene type synthetic adsorbents having bromine chemically substituted sold under the trademark DIAION SP207; high porous styrene type synthetic adsorbents sold under the trademarks DIAION SP700, DIAION SP825, DIAION SP850; methacrylic synthetic adsorbents sold under the trademark DIAION HP2MG; macroreticularly cross-linked aromatic polymers sold under the trademarks AMBERLITE XAD 4 , and AMBERLITE XAD 1600T; macroreticularly cross-linked aliphatic polymers sold under the trademark AMBERLITE XAD 7; carbonaceous synthetic adsorbents comprising a high porosity styrene/divinyl benzene ion exchange resin sold under the trademarks AMBERSORB 563, AMBERSORB 572, AMBERSORB 600; and high porous styrene/divinyl polymers sold under the trademarks LEWATIT VP OC 1064, LEWATIT VP OC 1066 AND LEWATIT EP 63.

4. (Currently Amended) The method according to claim 1, wherein the synthetic adsorbent eluent used in the primary pre-purification is eluted with purified water containing acetone in a concentration of 50 to 80%.

5. (Currently Amended) The method according to claim 1, wherein the resin used in the secondary pre-purification is ~~one selected among the~~ chosen from gel or porous type cation exchange resins, catalytic resins, and chelate resins which have a high cross-linkage of over 8% and are composed of high porous poly styrene divinyl polymer and have a sulphonate or iminoacetate group.

6. (Currently Amended) The method according to claim 5, wherein the resin used in the secondary pre-purification is ~~one selected from the group consisting of~~ chosen from DIAION SK1B, DIAION PK216, DIAION CR11, DIAION CR20, DIAION UBK555, TRILITE SPC 160H, TRILITE SPC 180H, TRILITE SPC 400LH, AMBERLITE 200C Na, AMBERLITE CG50, AMBERLITE CR1310 Na, AMBERJET 200H, AMBERLYST 131 WET, AMBERLYST 232 WET, Lewatit VP OC 1800, Lewatit VP OC 1812, Lewatit MDS1368 Na, Lewatit K1221, PUROLITE PCR833CA, PUROLITE C145, MFG 210 and MFG 250 gel-type cation exchange resins sold under the trademarks DIAION SK1B, DIAION UBK555, AMBERLITE CR1310 NA, AMBERJET 200H, LEWATIT VP OC 1800, LEWATIT MDS1368 NA, PUROLITE PCR833CA, MFG 210 and MFG 250; porous-type cation exchange resins sold under the trademarks DIAION PK216, AMBERLITE 200C NA, AMBERLITE CG50, LEWATIT VP OC 1812, and PUROLITE C145; gel-type catalytic resins sold under the trademarks AMBERLYST 131 WET, AMBERLYST 232 WET AND LEWATIT K1221; porous-type catalytic resins sold under the trademarks TRILITE SPC 160H, TRILITE SPC 180H and TRILITE SPC 400LH; and porous-type chelate resins sold

under the trademarks DIAION CR11 and DIAION CR20.

7. (Original) The method according to claim 6, wherein the resin used in the secondary pre-purification is regenerated by sequentially washing it with sodium hydroxide and a weak acid solution such as acetic acid or diluted hydrochloric acid and then, purified water so that the final eluate of purified water is in the range of pH 4.5 to 7.0.

8. (Original) The method according to claim 1, wherein the eluent used in the secondary pre-purification is purified water in the range of pH 10 to 13.

9. (Currently Amended) The method according to claim 1, wherein the ~~reversed~~ reversed phase resin comprises a silica containing non-polar side chain having 1 to 18 ~~carbon-carbons~~ and having a particle size of 15 to 150 μm .

10. (Currently Amended) The method according to claim 9, wherein the reversed phase resin is ~~one selected from the group consisting of~~ chosen from
a reversed phase resin comprising a silica-containing non-polar side chains with 18 carbons and a particle size of 15 to 30 μm (sold under the trademark SK-GEL ODS S-15/30),

a reversed phase resin comprising a silica-containing non-polar side chains with 18 carbons and a particle size of 35 to 75 μm (sold under the trademark Flash KP-C18-HS),

a reversed phase resin comprising a silica-containing non-polar side chains with 18 carbons and a particle size of 60 to 63 μm (sold under the trademark DAISOGEL 3001A), and

a reversed phase resin comprising a silica-containing non-polar side chains with 1 carbon and a particle size of 75 to 150 μm (sold under the trademark DMS DM 1020).

11. (Original) The method according to claim 1, wherein the eluent used in the final purification step is purified water containing acetone or acetonitrile in a concentration of 20 to 30%.